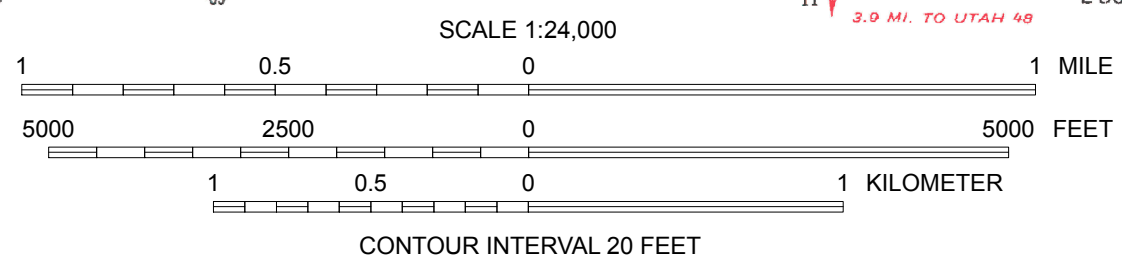


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Base from USGS Magna 7.5' Quadrangle (1999)  
National Agriculture Imagery Program (NAIP, 2009)  
Hillshade derived from 2-meter bare earth LIDAR (2006) data from the Utah Automated Geographic Reference Center  
State Geographic Information Database  
Projection: UTM Zone 12  
Datum: NAD 1983  
Spheroid: Clarke 1886

GIS and Cartography: Jessica J. Castleton and Corey D. Unger

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QUADRANGLE LOCATION

1	2	3
4	5	
6	7	8

ADJOINING 7.5' QUADRANGLE NAMES

1. Antelope Island South
2. Balleys Lake
3. Salt Lake City North
4. Farnsworth Peak
5. Salt Lake City South
6. Bingham Canyon
7. Copperton
8. Midvale

## SURFACE FAULT RUPTURE HAZARD MAP OF THE MAGNA QUADRANGLE, SALT LAKE COUNTY, UTAH

by  
Jessica J. Castleton, Ashley H. Elliott, and Greg N. McDonald  
2011

### EXPLANATION

- Not Mapped** – Areas not mapped due to significant and ongoing human disturbance.
- SURFACE FAULT RUPTURE HAZARD CATEGORIES**
  - Well-defined Holocene or suspected Holocene fault** – Movement within the past 11,700 years. Surface-fault-rupture hazard investigations recommended for all structures intended for human occupancy and all critical facilities.
  - Approximately located or concealed fault with an unknown activity class** – Activity class unknown; paleoseismic data are lacking; dashed where approximately located, dotted where concealed and approximately located. The UGS recommends investigators consider all possible. Quaternary faults to be Holocene unless data are adequate to preclude Holocene displacement, preliminary investigations should be conducted to make this determination. If the fault is determined to be Holocene, investigations should be conducted according to that activity class. If the fault is determined not to be Holocene in preliminary investigations, but is determined to be a Quaternary fault, then surface-fault-rupture hazard investigations are recommended for all essential and critical facilities. Investigations for other structures intended for human occupancy are optional (but highly recommended) because of the low likelihood of surface fault rupture, although surface fault rupture is still possible.
  - Surface-fault-rupture hazard special-study area** – The special-study areas established for well-defined faults extend for 500 feet on the downthrown side and 250 feet on the upthrown side of the mapped fault. Because their location is uncertain, the special-study areas around concealed and/or approximately located faults are broader, extending 1000 feet on each side of the suspected fault trace.

### USING THIS MAP

This map shows potentially active faults on the Magna quadrangle along which surface faulting may occur. A special-study area is shown around each fault, within which the UGS recommends a site-specific, surface-fault-rupture hazard investigation be performed prior to development. Site-specific geotechnical/geologic-hazard investigations can resolve uncertainties inherent in the generalized map scale and help ensure safety by identifying the need for fault setbacks. The map is not intended for use at scales other than 1:24,000; it is our opinion that the inventory of potentially active faults obtained from current geologic mapping and shown on this map is complete at that scale. However, smaller faults may not have been detected during mapping or are concealed beneath young geologic deposits. Additionally, concealed and approximately located faults by definition lack a clearly identifiable surface trace, therefore, their locations are approximate. Site-specific fault-trenching investigations should be preceded by a careful field evaluation of the site to identify the surface trace of the fault as well as other faults and fault-related features not evident at 1:24,000-scale.

For additional information about the surface-fault-rupture hazard in the Magna quadrangle, refer to Chapter 2 of the accompanying report.